

**Claims:** *The following is a listing of all claims in the application with their status and the text of all active claims.*

1. (CURRENTLY AMENDED) A Q-switch laser apparatus to deliver a sequence of laser pulses comprising:

- a laser cavity formed by a pair of reflective surfaces;
- a laser gain medium mounted in said laser cavity;
- optic coupling elements;
- a continuous optical pump radiation source whose pump radiation is coupled through said coupling elements in said laser gain medium;
- a quadratic electro-optic Q-switch mounted in said laser cavity, wherein the Q-switch comprises a La modified PMN-PT material;
- said Q-switch being connected with an electronic unit generating a radio frequency wave with positive and negative pulses alternatively; and
- said Q-switch being controlled by the radio frequency wave in such a way that laser pulse is generated when the radio frequency wave changes its polarity.

2. (CANCELED)

3. (CANCELED)

4. (CANCELED)

5. (CURRENTLY AMENDED) The Q-switch defined in claim [4] 1 further comprises La modified PMN-PT with the composition of 3.5/75/25.

6. (CURRENTLY AMENDED) The laser apparatus in claim 1 wherein said La modified PMN-PT electro-optic Q-switch operates at a voltage of 500 volts or less.

7. (CURRENTLY AMENDED) The laser apparatus in claim 1 wherein said La modified PMN-PT electro-optic Q-switch operates at a pulse repetition frequency up to 1MHz.

8. (CURRENTLY AMENDED) The laser apparatus in claim 1 wherein said La modified PMN-PT electro-optic Q-switch operates at a laser wavelength from 530 nm to 3000nm.

9. (CURRENTLY AMENDED) The laser apparatus in claim 1 wherein said La modified PMN-PT electro-optic Q-switch comprises a plate with [~~of transparent La modified PMN-PT material of~~] a width ( $w$ ) of about 0.4 –3 mm, a thickness ( $t$ ) of about 1.30 –3 mm, and a length ( $l$ ) of about 1.0 – 3.0 mm; [~~the plate having an optical axis 45°~~]

~~oriented to a polarization direction of radiation,]~~ the plate having electrodes for applying an operating voltage less than 500 volts.

10. (CURRENTLY AMENDED) A Q-switch laser apparatus to deliver a sequence of laser pulses comprising:

a laser cavity having a pair of reflective surfaces;

a laser gain medium mounted in said laser cavity;

optic coupling elements;

a continuous optical pump radiation source whose pump radiation is coupled through said coupling elements in said laser gain medium;

a quadratic electro-optic Q-switch mounted in said laser cavity, wherein the Q-switch comprises a La modified PMN-PT material;

said Q-switch being connected with an electronic unit generating a radio frequency wave with positive and negative pulses alternatively;

said Q-switch being controlled by the radio frequency wave in such a way that laser pulse is generated when the radio frequency wave changes its polarity; and

a polarizer mounted ~~[45° to the optical axis of]~~ to said Q-switch.

11. (CURRENTLY AMENDED) A Q-switch laser apparatus to deliver a sequence of laser pulses comprising:

a laser cavity having a pair of reflective surfaces;

a laser gain medium mounted in said laser cavity;

a frequency doubling KTP mounted in said laser cavity;

optic coupling elements;

a continuous optical pump radiation source whose pump radiation is coupled through said coupling elements in said laser gain medium;

a quadratic electro-optic Q-switch mounted in said laser cavity, wherein the Q-switch comprises a La modified PMN-PT material;

said Q-switch being connected with an electronic unit generating a radio frequency wave with positive and negative pulses alternatively; and

said Q-switch being controlled by the radio frequency wave in such a way that laser pulse is generated when the radio frequency wave changes its polarity.